DOCKET NO. D-1970-133 CP-4

DELAWARE RIVER BASIN COMMISSION

Mount Holly Municipal Utilities Authority
Wastewater Treatment Plant
Mount Holly Township, Burlington County, New Jersey

PROCEEDINGS

This docket is issued in response to an Application submitted to the Delaware River Basin Commission (DRBC or Commission) by the Mount Holly Municipal Utilities Authority (MHMUA or docket holder) on February 29, 2012 (Application), for renewal of an existing wastewater treatment plant (WWTP) discharge. New Jersey Pollutant Discharge Elimination System (NJPDES) Permit No. NJ0024015 for this project was approved by the New Jersey Department of Environmental Protection (NJDEP) on May 11, 2007. The NJDEP is expected to issue renewal of this permit shortly.

The Application was reviewed for continuation of the project in the Comprehensive Plan and approval under Section 3.8 of the *Delaware River Basin Compact*. The Burlington County Planning Board has been notified of pending action. A public hearing on this project was held by the DRBC on September 12, 2012.

A. DESCRIPTION

1. **Purpose**. The purpose of this docket is to renew the approval of an existing discharge from the 6.0 million gallons per day (mgd) MHMUA Mount Holly Water Pollution Control Facility (MHWPCF) WWTP.

2. **Location**. The existing MHWPCF WWTP will continue to discharge treated effluent, via Outfall No. DSN001A, to the North Branch Rancocas Creek, located in Water Quality Zone 2, at River Mile 111.06 – 8.64 – 4.1 (Delaware River – Rancocas Creek – North Branch Rancocas Creek), in Mount Holly Township, Burlington County, New Jersey as follows:

OUTFALL NO.	LATITUDE (N)	LONGITUDE (W)
DSN001A	39° 59’ 42”	74° 48’ 8.5”

3. **Area Served**. The MHWPCF WWTP serves Mount Holly and portions of Eastampton, Hainesport, Lumberton, Moorestown, and Westampton Townships, all within Burlington County, New Jersey. Additionally, the MHWPCF WWTP receives sludge, septage, leachate, and miscellaneous wastewaters for processing from within and outside the Basin. The Monmouth County Reclamation Center is the primary out of basin source and has historically transported up to eighteen (18) million gallons of leachate to the MHWPCF WWTP yearly (0.05 mgd on average). Total average flows from all sources (both in and out of basin) are presently estimated for this docket cycle to be roughly 0.1 mgd. All carbonaceous biological oxygen demand (CBOD) loading related to out of basin wastewater must be removed as part of the treatment system and the MHWPCF's CBOD5 % removal has been adjusted accordingly. For the purpose of defining the Area Served, the Application is incorporated herein by reference consistent with conditions contained in the DECISION Section of this docket.

Beneficial Reuses of the WWTP effluent are also approved by the NJDEP.

4. **Physical Features**.

a. **Design Criteria**. The docket holder operates two treatment facilities. The first is the Rancocas Road WWTP and the second is the Maple Avenue WWTP. Each facility has a design discharge of 3.0 mgd. They share a common outfall and together comprise the existing 6.0 mgd MHWPCF WWTP.

b. **Facilities**. The Rancocas Road WWTP consists of screening and grit removal, an equalization tank, four (4) primary settling tanks, three (3) trickling filters, two (2) activated sludge reactors, two (2) secondary settling tanks, three (3) disc filters, three (3) chlorine contact tanks, a post aeration tank, two (2) sludge blending/storage tanks, a rotary thickener, and two (2) belt filter presses.

The Maple Avenue WWTP consists of two screening/grit removal units, a six pass aeration tank, three (3) secondary settling tanks, an effluent pump station, and a chlorine contact tank. Sludge is directed via pipe to one of the sludge blending/storage tanks at the Rancocas Road WWTP.

Both WWTPs are located outside the 100-year floodplain.

The majority of the dewatered sludge is composted at the Burlington County Resource Recovery Complex. The Atlantic County Utilities Authority may be used as an alternative.

c. **Water withdrawals**. The potable water supply in the project service area is supplied by the New Jersey American Water Company.

d. **NJPDES Permit / DRBC Docket**. NJPDES Permit No. 0024015 was approved by the NJDEP on May 11, 2007 and includes final effluent limitations for the project discharge staged flow rates of 5.0, 6.0, and 7.675 mgd to surface waters classified by the NJDEP as FW2 Non-Trout (C2) waters. The NJDEP is expected to issue renewal of this Permit shortly after

docket approval. The following average monthly effluent limits are among those listed in the NJPDES Permit for a 6.0 mgd discharge and meet or are more stringent than the effluent requirements of the DRBC.

EFFLUENT TABLE A-1: DRBC Parameters Included in NJPDES Permit

OUTFALL DSN001A (WWTP)		
PARAMETER	**LIMIT**	**MONITORING**
pH (Standard Units)	6 to 9 at all times	As required by NJPDES Permit
Total Suspended Solids	30 mg/l	As required by NJPDES Permit
CBOD5 (5-1 to 10-31) (11-1 to 4-30)	15 mg/l ** (88.5% minimum removal*) 25 mg/l (88.5% minimum removal*)	As required by NJPDES Permit
Ammonia Nitrogen	35 mg/l *	As required by NJPDES Permit
Fecal Coliform	200 colonies per 100 ml as a geo. avg.	As required by NJPDES Permit
Acute Toxicity	50% Effluent ***	As required by NJPDES Permit
PCBs	Monitor & Report *	As required by NJPDES Permit

* DRBC Requirement

** When flows meet or exceed 5.0 mgd for three consecutive months, the CBOD5 limit from 5-1 to 10-31 shall be 11 mg/l instead of 15 mg/l in accordance with the NJPDES Permit

*** See the FINDINGS Section for Species

EFFLUENT TABLE A-2: DRBC Parameters Not Included in NPDES Permit

OUTFALL DSN001A (WWTP)		
PARAMETER	**LIMIT**	**MONITORING**
Total Dissolved Solids *	1,000 mg/l *	Quarterly ***
CBOD20 * (5-1 to 10-31) (11-1 to 4-30)	1,327 lbs/day * 2,211 lbs/day *	Variable ****
Chronic Toxicity *	Monitor & Report **	Semi-Annually *
Color *	Monitor & Report *	Monthly *

* DRBC Requirement

** See the FINDINGS Section for Species

*** See DECISION Condition II.r.

**** See DECISION Condition II.u.

e. **Cost**. There are no construction costs associated with this renewal.

f. **Relationship to the Comprehensive Plan**. The MHWPCF was added to the Comprehensive Plan on July 21, 1962 via Resolution No. R-62-14. Expansions to the MHWPCF were performed and updates to the Comprehensive Plan occurred following approval of Dockets Nos. D-70-133 CP, D-70-133 CP (REVISED), and D-70-133 CP-3 on March 17, 1971, November 10, 1976, and May 10, 2007, respectively. Approval of this docket will

continue the 6.0 mgd WWTP in the Comprehensive Plan in accordance with DECISION Condition I.c.

B. FINDINGS

The purpose of this docket is to renew the approval of an existing discharge from the 6.0 mgd MHWPCF WWTP.

$CBOD_{20}$ Wasteload Allocation

The Commission's *Water Quality Regulations* (*WQR*) provide for the allocation of the stream assimilative capacity where waste discharges would otherwise result in exceeding such capacity. It was determined in the late 1960's that discharges to the Delaware Estuary be limited to a total of 322,000 lbs/day of carbonaceous biochemical (first stage) oxygen demand ($CBOD_{20}$). In accordance with the Regulations, the assimilative capacity of each Delaware Estuary zone minus a reserve was originally allocated in 1968 among the individual dischargers based upon the concept of uniform reduction of raw waste in a zone (Zones 2, 3, 4 and 5). The totals and percent reduction for each zone are given in Table 1 of the Commission's *Status of CBOD20 Wasteload Allocations* (Revised October 1, 2000). The docket holder's WWTP discharges to Water Quality Zone 2 of the Delaware River at River Mile 111.06 – 8.64 – 4.1 (Delaware River – Rancocas Creek – North Branch Rancocas Creek). Water Quality Zone 2 is currently over-allocated and reductions have occurred since the year 2000 in an attempt to balance the zone.

$CBOD_{20}$ Allocation History

A letter from the Executive Director on March 13, 1996 approved an allocation of 1,919 lbs/day (11/1 – 4/30) and 1,152 lbs/day (5/1 – 10/31) of $CBOD_{20}$, respectively.

A meeting between Commission staff, the docket holder, and the docket holder's consultant, Omni Environmental, took place on May 8, 1996. As a result of the meeting a $CBOD_5$ to $CBOD_{20}$ ratio of 2.12 was established.

A letter from the Executive Director on July 16, 1996 increased the seasonal allocations to 2,211 lbs/day (11/1 – 4/30) and 1,327 lbs/day (5/1 – 10/31) of $CBOD_{20}$, respectively.

Docket No. D-70-133 CP-3 continued approval for an allocation of 2,211 lbs/day (11/1 – 4/30) and 1,327 lbs/day (5/1 – 10/31) of $CBOD_{20}$, respectively, on May 10, 2007.

$CBOD_{20}$ Determination

On July 14, 2010 the Commission adopted Resolution No. 2010-5 authorizing and directing the Executive Director to require point source dischargers to the Delaware Estuary to perform nutrient monitoring of their discharges at their own cost and expense for a period of up to 24 months. On September 7, 2011 the Commission's Modeling Monitoring and Assessment

(MMA) Branch sent a letter to the docket holder requiring the 24 month sampling for their facility begin. The Commission's MMA Branch received confirmation that the first set of samples for this suite of nutrient parameters started in October 2011 and therefore is expected to finish in September 2013. $CBOD_5$ and $CBOD_{20}$ were two of the parameters whose data was requested as a result of this nutrient monitoring. As such, the docket holder is required to monitor $CBOD_5$ and $CBOD_{20}$ concurrently on a monthly period through September 2013.

After September 2013, the docket holder will only be required to monitor for $CBOD_{20}$ on a quarterly basis. The sample should be taken concurrently with the $CBOD_5$ sample. Should the existing $CBOD_5$ to $CBOD_{20}$ ratio of 2.12 be affirmed or a new one established as a result of the nutrient monitoring program approved by Resolution No. 2010-5, the docket holder may request the removal of this monitoring entirely via letter to the Executive Director (See DECISION Condition II.u.). Until the Executive Director has approved the elimination of the sampling, samples should continue as required.

This docket shall continue approval for an allocation of 2,211 lbs/day (11/1 – 4/30) and 1,327 lbs/day (5/1 – 10/31) of $CBOD_{20}$, respectively.

PCBs

The docket holder is required to monitor for 209 PCB congeners using Method 1668A as described in its NJPDES Permit for PCBs (See DECISION Condition II.t.).

Toxicity

Zone 2 stream quality objectives exist for toxic pollutants. They include criteria to protect the taste and odor of ingested water and fish [Table 4 of DRBC's *WQR*], to protect aquatic life (Table 5), and to protect human health (Tables 6 & 7). Toxicity in effluent is measured as Whole Effluent Toxicity (WET), and results from both acute and chronic exposures. The acute toxicity stream quality objective for Zone 2 is 0.3 Toxic Units (TUa = 0.3). The chronic toxicity stream quality objective for Zone 2 is 1.0 Toxic Units (TUc = 1.0).

Acute Toxicity

The docket holder is required to perform Whole Effluent Toxicity (WET) tests to generate acute toxicity data on the fathead minnow (*Pimephales promelas)* as part of their existing NJPDES Permit. The DRBC is also requiring testing of the cladoceran (*Ceriodaphnia dubia*) since no dual data species testing supporting the elimination of one more restrictive species has been submitted to the Commission. Both species results shall be provided to the DRBC for review with the same monitoring frequency as that found in the NJPDES Permit (semi-annually). Results shall be submitted to the Commission annually with the report required in DECISION Condition II.e. of this docket. Monitoring for both species shall be continued until at least 10 samples have been taken.

Chronic Toxicity

The docket holder is required to perform semi-annual WET tests to generate chronic toxicity data on the cladoceran (*Ceriodaphnia dubia)*. Since the influent wastewater stream changes at the facility the Commission is requiring that both the cladoceran and fathead minnow species be tested dually in 2016 to determine if cladoceran is still the more sensitive species. Samples shall be taken concurrently with acute samples to develop a correlation. Results shall be submitted to the Commission annually with the report required in DECISION Condition II.e. of this docket.

Other

At the project site, the North Branch Rancocas Creek is tidal and the $Q_{7\text{-}10}$ flow is not easily calculated especially since Mill Dam Reservoir operations directly affect stream flows.

The nearest surface water intake of record for public water supply downstream of the project discharge is operated by the New Jersey American Water Company on the Delaware River approximately 14 miles away.

The project does not conflict with the Comprehensive Plan and is designed to prevent substantial adverse impact on the water resources related environment, while sustaining the current and future water uses and development of the water resources of the Basin.

The limits in the NJPDES Permit are in compliance with Commission effluent quality requirements, where applicable.

The project is designed to produce a discharge meeting the effluent requirements as set forth in the *WQR* of the DRBC.

C. DECISION

I. Effective on the approval date for Docket No. D-1970-133 CP-4 below:

a. The project described in Docket No(s). D-70-133 CP-3 is removed from the Comprehensive Plan to the extent that it is not included in Docket No. D-1970-133 CP-4; and

b. Docket No. D-70-133 CP-3 is terminated and replaced by Docket No. D-1970-133 CP-4; and

c. The project and the appurtenant facilities described in the Section A "Physical Features" of this docket shall be added to the Comprehensive Plan.

II. The project and appurtenant facilities as described in the Section A "Physical Features" of this docket are approved pursuant to Section 3.8 of the *Compact*, subject to the following conditions:

a. Docket approval is subject to all conditions, requirements, and limitations imposed by the NJDEP in its NJPDES Permit, and such conditions, requirements, and limitations are incorporated herein, unless they are less stringent than the Commission's.

b. The facility and operational records shall be available at all times for inspection by the DRBC.

c. The facility shall be operated at all times to comply with the requirements of the *Water Quality Regulations* of the DRBC.

d. The docket holder shall maintain and make available to DRBC upon request, records identifying the sources, volumes and characteristics of all wastewaters and sludges treated at the WWTP, as well as the dates when off-site wastes were received and treated. Records are to be retained for 5 years, in accordance with N.J.A.C. 7:14A-6.6.

e. The docket holder shall comply with the requirements contained in the Effluent Tables in Section A.4.d. of this docket. The docket holder shall submit the required monitoring results directly to the DRBC Project Review Section. The monitoring results shall be submitted annually, absent any observed limit violations, by January 31. If a DRBC effluent limit is violated, the docket holder shall submit the result(s) to the DRBC within 30 days of the violation(s) and provide a written explanation that states the action(s) the docket holder has taken to correct the violation(s) and protect against any future violations.

f. Except as otherwise authorized by this docket, if the docket holder seeks relief from any limitation based upon a DRBC water quality standard or minimum treatment requirement, the docket holder shall apply for approval from the Executive Director or for a docket revision in accordance with Section 3.8 of the *Compact* and the *Rules of Practice and Procedure*.

g. If at any time the receiving treatment plant proves unable to produce an effluent that is consistent with the requirements of this docket approval, no further connections shall be permitted until the deficiency is remedied.

h. Nothing herein shall be construed to exempt the docket holder from obtaining all necessary permits and/or approvals from other State, Federal or local government agencies having jurisdiction over this project.

i. The discharge of wastewater shall not increase the ambient temperatures of the receiving waters by more than 5°F, nor shall such discharge result in stream temperatures exceeding 87°F.

j. The docket holder is permitted to treat and discharge the categories of wastewaters defined in the "Area Served" section of this docket.

k. The docket holder shall make wastewater discharge in such a manner as to avoid injury or damage to fish or wildlife and shall avoid any injury to public or private property.

l. No sewer service connections shall be made to newly constructed premises with plumbing fixtures and fittings that do not comply with water conservation performance standards contained in Resolution No. 88-2 (Revision 2).

m. Nothing in this docket approval shall be construed as limiting the authority of DRBC to adopt and apply charges or other fees to this discharge or project.

n. The issuance of this docket approval shall not create any private or proprietary rights in the waters of the Basin, and the Commission reserves the right to amend, suspend or rescind the docket for cause, in order to ensure proper control, use and management of the water resources of the Basin.

o. Unless an extension is requested and approved by the Commission in advance, in accordance with paragraph 11 of the Commission's Project Review Fee schedule (Resolution No. 2009-2), the docket holder is responsible for timely submittal of a docket renewal application on the appropriate DRBC application form at least 12 months in advance of the docket expiration date set forth below. The docket holder will be subject to late charges in the event of untimely submittal of its renewal application, whether or not DRBC issues a reminder notice in advance of the deadline or the docket holder receives such notice. In the event that a timely and complete application for renewal has been submitted and the DRBC is unable, through no fault of the docket holder, to reissue the docket before the expiration date below (or the later date established by an extension that has been timely requested and approved), the terms and conditions of the current docket will remain fully effective and enforceable against the docket holder pending the grant or denial of the application for docket approval.

p. The Executive Director may modify or suspend this approval or any condition thereof, or require mitigating measures pending additional review, if in the Executive Director's judgment such modification or suspension is required to protect the water resources of the Basin.

q. Any person who objects to a docket decision by the Commission may request a hearing in accordance with Article 6 of the Rules of Practice and Procedure. In accordance with Section 15.1(p) of the Delaware River Basin Compact, cases and controversies arising under the Compact are reviewable in the United States district courts.

r. The docket holder may request of the Executive Director in writing the substitution of specific conductance for TDS. The request should include information that supports the effluent specific correlation between TDS and specific conductance. Upon review, the Executive Director may modify the docket to allow the substitution of specific conductance for TDS monitoring.

s. The docket holder is prohibited from treating/pre-treating any hydraulic fracturing wastewater from sources in or out of the Basin at this time. Should the docket holder wish to treat/pre-treat hydraulic fracturing wastewater in the future, the docket holder will need to first apply to the Commission to renew this docket and be issued a revised docket allowing such treatment and an expanded service area. Failure to obtain this approval prior to treatment/pre-treatment will result in action by the Commission.

t. The docket holder shall continue to submit monitoring data for PCBs to the Commission's Modeling, Monitoring and Assessment Branch as required in the existing NJPDES Permit.

u. The docket holder is required to monitor $CBOD_5$ and $CBOD_{20}$ concurrently on a monthly period through September 2013. After September 2013, the docket holder is required to monitor for $CBOD_{20}$ on a quarterly basis. The sample should be taken concurrently with the $CBOD_5$ sample. Should the existing $CBOD_5$ to $CBOD_{20}$ ratio of 2.12 be affirmed or a new one established as a result of the nutrient monitoring program approved by Resolution No. 2010-5, the docket holder may request the removal of this monitoring entirely via letter to the Executive Director. Until the Executive Director has approved the elimination of the sampling, samples should continue as required.

BY THE COMMISSION

DATE APPROVED: **September 12, 2012**

EXPIRATION DATE: **September 30, 2017**